Snohomish County
Planning and Development Services

Decks (Porches & Steps (Uncovered))

Assistance Bulletin
#21

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WWW.SNOCO.ORG **Keyword: Assistance Bulletins**

Visit us at :

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1-800-562-4367, ext. 3311

PERMIT SUBMITTAL
Appointment
425.388.3311
Ext. 2790

This Assistance Bulletin only applies to property within unincorporated Snohomish County and does not apply to property within incorporated city limits.

Q: Do I need a building permit to build my deck, porch, or steps?

A: Permits are required for Residential uncovered decks, associated platforms and steps only if any of the following apply:

- The walking surface is more than 30 inches above grade at any point
- The deck, porch, or step is over any basement or story below
- The deck, porch, or step is part of a required accessible route of travel serving a facility such as an Adult Family Home

Q: How do I get a building permit?

A: An appointment is required to submit a building permit application. You may request a submittal appointment by calling 425 388-3311, ext 2790 or by going online to www.snoco.org/App/pds/appts/.

The following three items are required to apply for a building permit:

1. A completed Residential Building Permit Application. You can download a copy at http://www.co.snohomish.wa.us/documents/Departments/PDS/Forms/residentialapplication.pdf.
2. A Base Site Plan including items 1-13 noted at http://www.co.snohomish.wa.us/documents/Departments/PDS/Checklists/ResidentialSitePlanSubmittalChecklist.pdf. Site plans must be drawn to any engineering scale such as 1" = 10', 20', 30', 100', or 200'. Maximum paper size shall be 11"x 17".
3. Structural plans drawn to scale (1/4" = 1' is preferred) which include at least one plan view and one elevation view. If the deck is connected to a structure, it is important to show details for the connection.

Q: How much does the permit cost?

A: The fees for deck building permits vary depending on the site. The **minimum** fee for any size uncovered deck is $171.88. Additional fees may include Health District (office review $111, field review $221), Site Review $50, Critical Area Review $250, depending upon type of review (all structures may be subject to additional drainage fees as determined during the review process). If the site is located in a Flood Hazard Zone, a Flood Hazard Permit is required.

This bulletin is intended only as an information guide. The information may not be complete and is subject to change. For complete legal information, refer to Snohomish County Code.

Q: What about required setback distances to property lines?

A: Setback distances to property lines depend on the zoning for the property and if the property line is adjacent to a public right-of-way or an easement. The Snohomish County Zoning Code provides that uncovered decks, porches, and steps may project into a required setback, provided they are not higher than 4 feet above the finished grade level, that they are no closer than 30 inches to any property line and that they do not project more than 6 feet into the setback required from a street.

Uncovered decks, porches, and steps more than 4 feet in height, or any covered deck, porch, or steps must meet all building setback requirements.

"Construction Tip Sheets" are available at www.mybuildingpermit.com. The 2006 IRC version is acceptable with the addition of minimum 1,500 pound hold-down tension devices installed in not less than two locations for lateral bracing as required by Section R502.2.2.3, 2009 IRC.

You may also contact us if you have any questions via:

Email: PermitTech@snoco.org
Telephone: 425-388-3311
Visit us at: 2nd Floor, Robert J. Drewel Building, 3000 Rockefeller Avenue, Everett

2009 Codes

Prescriptive Residential Wood Deck Construction Guide

Based on 2009 International Residential Code

This tip sheet provides building code information applicable to deck design, but does not take into account all conditions which may affect design such as slope conditions, decks supporting in excess of 50 psf uniform loads, etc. You may need to hire a licensed architect or an engineer to design decks where any of the **following conditions apply:**

- The deck serves other than a one or two family dwelling building
- The deck design includes more than one level
- The deck will support hot tubs, spas or other heavy objects
- The walking surface is more than ten feet above grade
- The deck ledger is attached to house overhangs, bay windows,bricks, stone or concrete block
- The deck is bearing on ground with slope greater than 2 feet horizontal for every 1 foot vertical

Deck Construction Notes:

1. The illustrations and information in this tip sheet may be used for decks whether or not they require a permit. See Tip Sheet 0 for permit requirements.
2. All wood must be pressure treated or naturally resistant to decay. Treat all cut ends with end-cut solution. Use ground-contact treated wood.
3. Fasteners, hangers, nails, etc., must be stainless steel, hot-dipped galvanized, or as specifically required for the specified wood preservative used. The coating weights for zinc-coated fasteners to be in accordance with ASTM A 153. Provide documentation in the field showing the required fastener protection considering the wood chosen for your deck.
4. You may modify any components of this tip sheet with justification by analysis or calculation. Any modifications must be reviewed prior to permit issuance.
5. See Tip Sheet 1 for stairs, 2 for handrails, and 3 for guards.
6. This tip sheet is intended to represent good construction practices for deck construction and related IRC requirements.
7. All wood assumed to be Hem-Fir #2 or better.
8. Attachments must be per manufactured specifications.

As an alternate to this tip sheet, the following may be used when designing your deck.

- Engineered design
- DCA-6 - Prescriptive Residential Deck Construction Guide - 2009 Version; see the following link: http://www.awc.org./codes/dcaindex.html

GENERAL INFORMATION:

- Consult with your local land use or planning department regarding setbacks and other zoning regulations
- Obtain a building permit before starting construction
- The intent of this tip sheet is to address basic code information related to residential deck construction only. Additional information can be found at your local building department.

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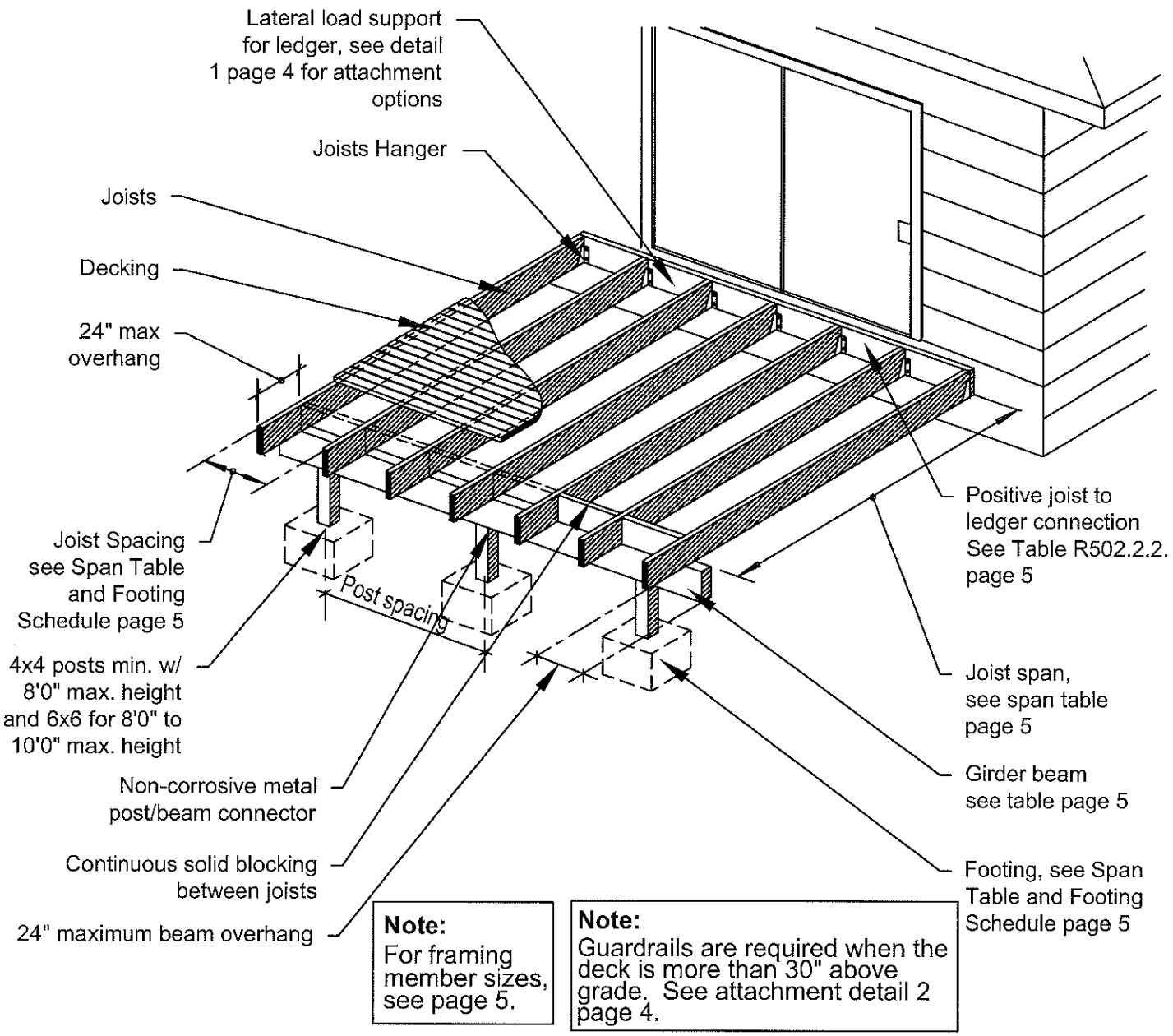


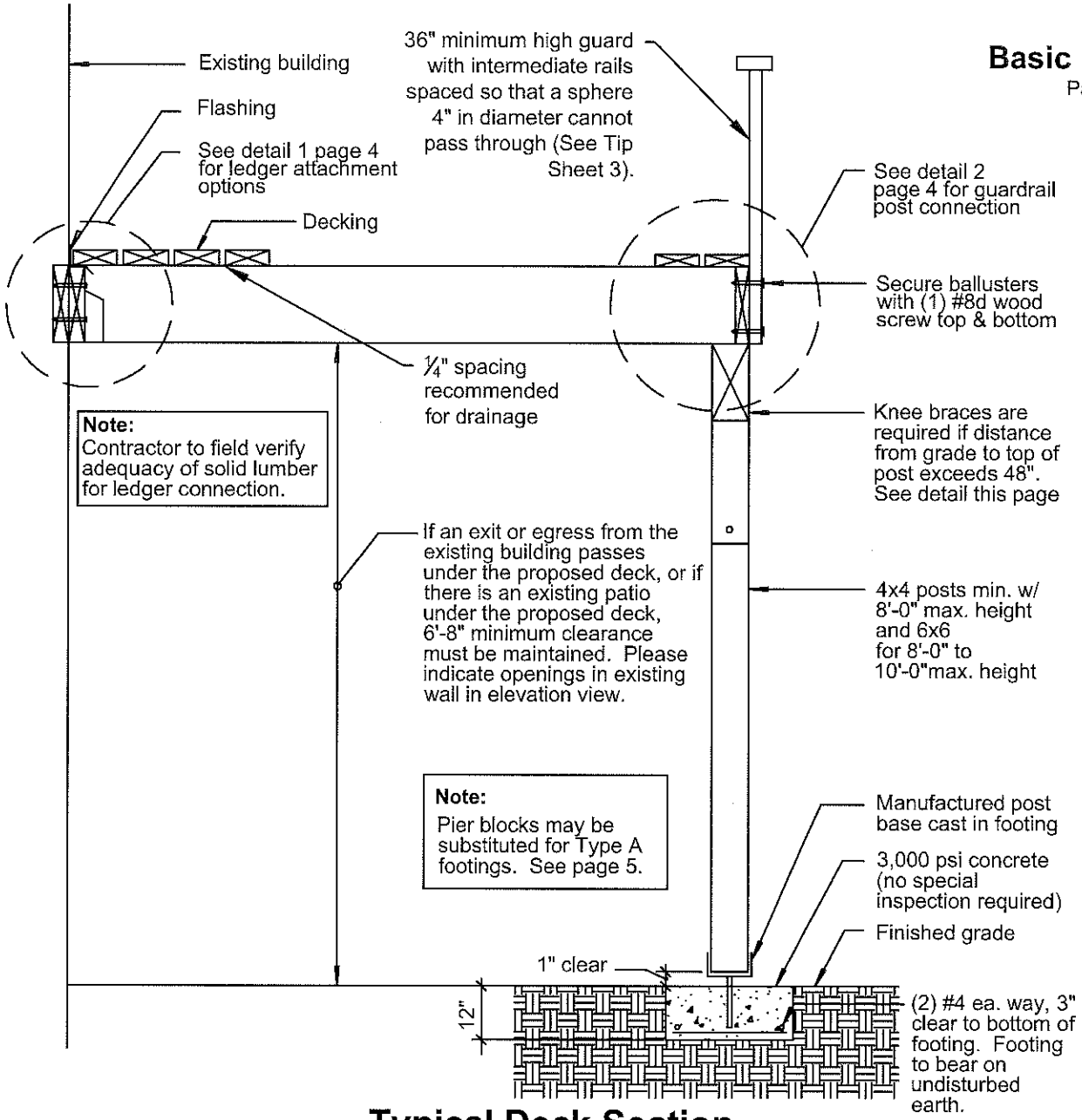
Note:
For framing member sizes, see page 5.

Note:
Guardrails are required when the deck is more than 30" above grade. See attachment detail 2 page 4.

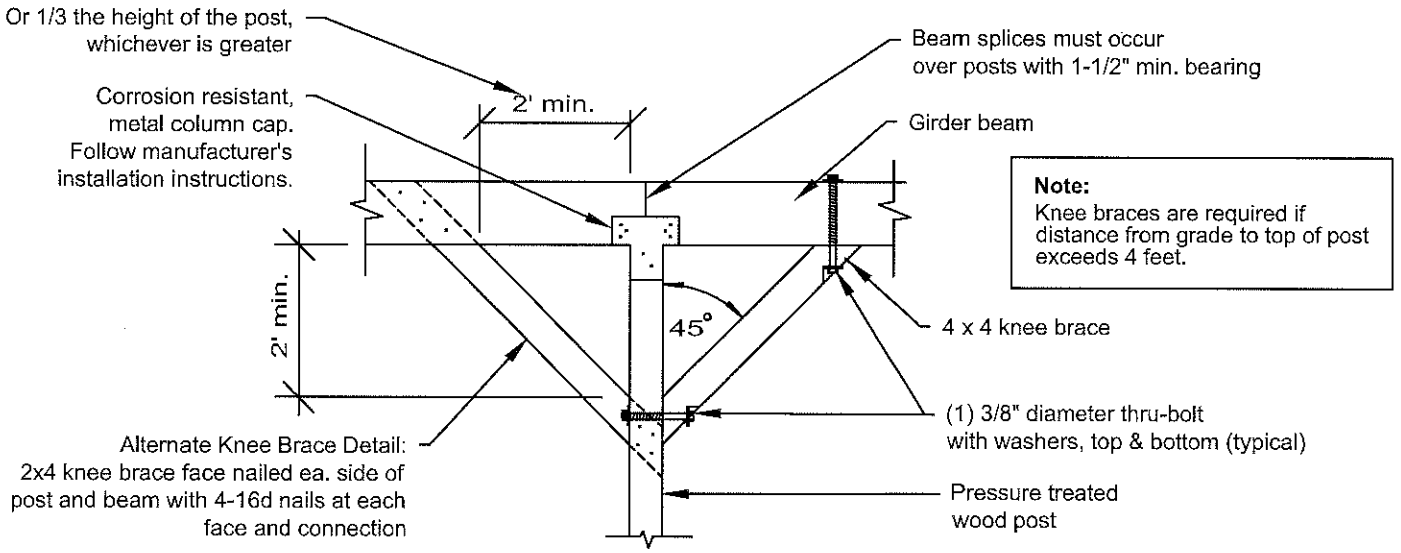
Typical Deck

Submittal Requirements:

1. Two Site Plans, drawn to scale, showing dimensions of your deck and its relationship to existing buildings or structures on the property and the distance to existing property lines. Include the project address on the drawings.
2. Two plans showing the framing layout of your deck.
3. Fill out a building permit application for the appropriate jurisdiction.
4. If your deck will occur on a steep slope, please contact your local building department for additional requirements.



Typical Deck Section



Post to Beam Connection w/ Knee Brace

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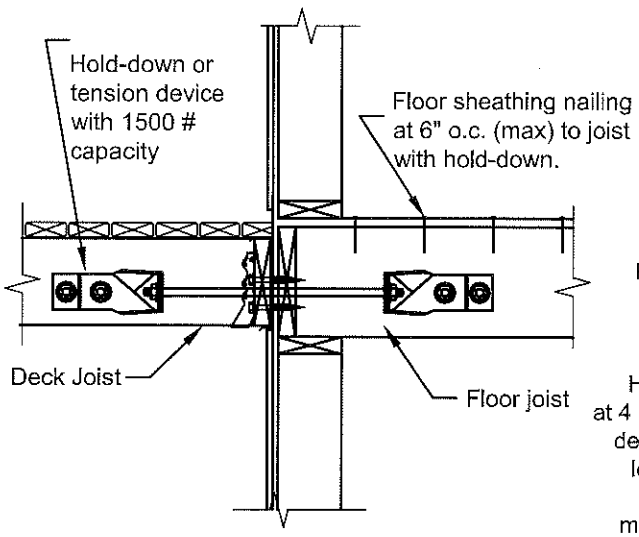
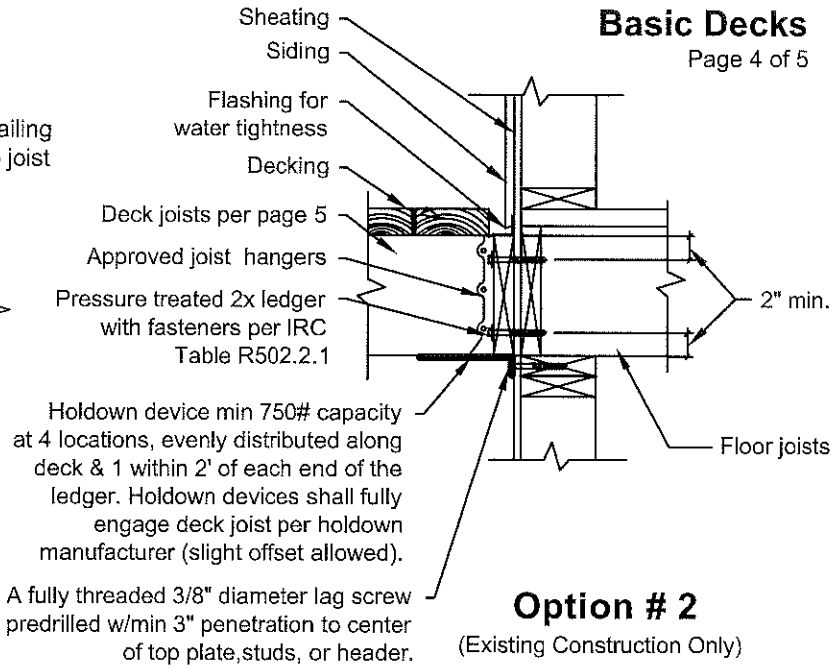


Option # 1
(Required for New Construction)

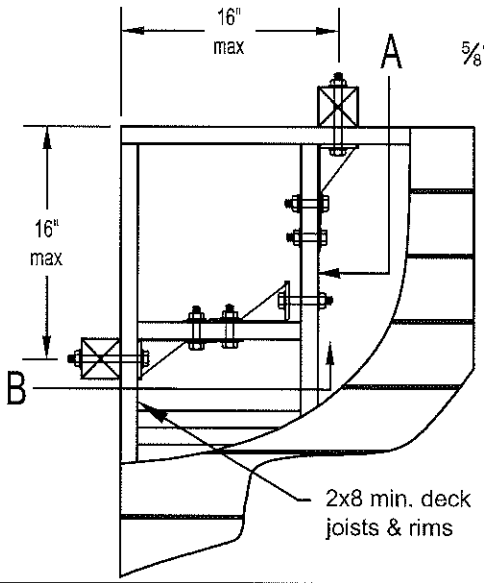


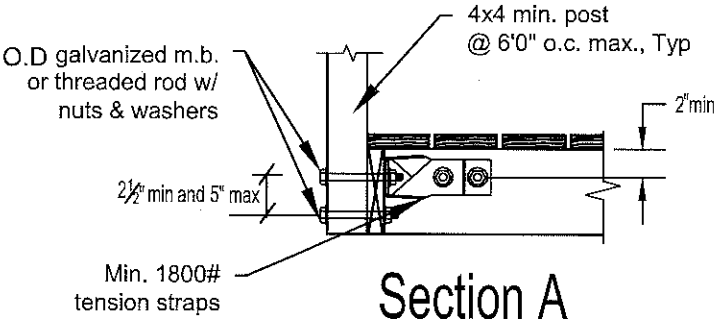
Option # 2
(Existing Construction Only)

Note:
These details are applicable where floor joists are parallel to deck joists.

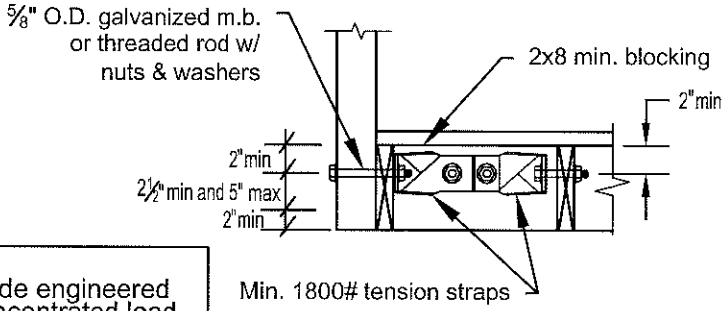
Note:
Holdown devices are not required for decks less than 3'-0" high or free standing decks.

1 Ledger Attachment for Lateral Loads Per IRC 502.2.2.3





Section A



Section B

Note:
Use above details for guard connections or provide engineered design that shows Guards can resist a single concentrated load of 200 lbs applied in any direction at any point along the top and have attachment devices and supporting structure to transfer this load to appropriate structural elements of the building per IBC sec 1607.7.1.1

2 Guardrail Connection

(Guardrils are required when the deck is more than 30" above grade.)

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Span Table and Footing Schedule For Decks

Spans based on use of No.2 Hem-Fir or better
50 p.s.f. loading (10 p.s.f. dead load + 40 p.s.f. live load)
Beam spans and footings assume maximum 24" overhang

Joist size	Spacing of joists	Max. span of joists	Max. span of girder beams between posts / footing type					
			4x6	Footing	4x8	Footing	4x10	Footing
2X6	@ 12 in	9 ft - 10 in	5 ft - 5 in	B	7 ft - 2 in	B	8 ft - 10 in	C
	@ 16 in	8 ft - 9 in	5 ft - 8 in	B	7 ft - 6 in	B	9 ft - 2 in	B
	@ 24 in	7 ft - 1 in	6 ft - 1 in	B	8 ft - 0 in	B	9 ft - 10 in	B
2X8	@ 12 in	12 ft - 9 in	4 ft - 11 in	B	6 ft - 6 in	B	8 ft - 0 in	B
	@ 16 in	11 ft - 1 in	5 ft - 2 in	A	6 ft - 11 in	B	8 ft - 5 in	C
	@ 24 in	9 ft - 0 in	5 ft - 7 in	B	7 ft - 5 in	B	9 ft - 1 in	B
2X10	@ 12 in	15 ft - 7 in	4 ft - 7 in	B	6 ft - 0 in	B	7 ft - 5 in	C
	@ 16 in	13 ft - 6 in	4 ft - 10 in	B	6 ft - 5 in	B	7 ft - 10 in	C
	@ 24 in	11 ft - 0 in	5 ft - 3 in	A	6 ft - 11 in	B	8 ft - 5 in	B

FOOTING TYPES

TYPE	SIZE	NOTE:
A	12" X 12" X 12"	Pier blocks may be substituted for Type A footings
B	16" X 16" X 12"	
C	18" x 18" x 12"	

*Footing sizes based on assumed soil bearing pressure of 2000 p.s.f. Contact your jurisdiction for additional restrictions.

Table R502.2.2.1

Fastener spacing for a Southern Pine or Hem-Fir deck ledger and a 2 inch nominal solid-sawn Spruce-Pine-Fir band joist. See notes C,F,G.
(Deck live load = 40 psf, deck dead load= 10 psf)

Joist Span	6' and less	6'-1" to 8'	8'-1" to 10'	10'-1" to 12'	12'-1" to 14'	14'-1" to 16'	16'-1" to 18'
Connection Details	On-center spacing of fastners. Note d and e.						
1/2 inch diameter lag screw with 15/32 inch maximum sheathing. Note (a)	30	23	18	15	13	11	10
1/2 inch diameter bolt with 15/32 inch maximum sheathing.	36	36	34	29	24	21	19
1/2 inch diameter lag screw with 15/32 inch maximum sheathing & stacked washers. Note (b&h)	36	36	29	24	21	18	16

For SI: 1 inch = 25.4mm, 1 foot = 304.8mm. 1pound per square foot=0.04479kPa.

a. The tip of the lag screw shall fully extend beyond the inside face of band joist.
b. The maximum gap between face of the ledger board and face of wall sheathing shall be 1/2".
c. Ledgers shall be flashed to prevent water from contacting the house band joist.
d. Lag screws and bolts shall be staggered in accordance with Section R502.2.2.1.1.
e. Deck ledger shall be minimum 2x8 pressure-preservative-treated No.2 grade lumber or other approved materials as established by standard engineering practice.
f. When solid-sawn pressure-preservative-treated-deck ledgers are attached to a minimum 1inch thick engineered wood product (structural composite lumber - laminated veneer lumber or wood structural panel band joist) the ledger attachment shall be designed in accordance of engineering practice.
g. A minimum 1x 9 $\frac{1}{2}$ Douglas Fir laminated veneer lumber rimboard shall be permitted in lieu of the 2-inch nominal band joist.
h. Wood structural panel sheathing, gypsum board sheathing or foam sheathing not exceeding 1 inch in thickness shall be permitted. The maximum distance between the face of the ledger board and face of the band joist shall be 1 inch.

Deck Connections

All fasteners, nails, bolts, screws, etc. must be corrosion resistant. See Deck Construction Note 3, page 2.
Follow manufacturer's instructions for timber connectors.

Connections		Nailing
1	Joist on deck beam; toenail each end	(3) 8d
2	Bridging or blocking to joist; toenail ea. side, ea. end	(3) 8d
3	2x decking to joist or deck beam; blind and face nail	(2) 16d
4	Joist hangers - See detail 1 on page 5	

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